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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/888,736	06/25/2001	Petar R. Dvornic	MIC35 P-321	2078

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EXAMINER

MULLIS, JEFFREY C

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 04/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/888,736

Applicant(s)

DVORNIC ET AL.

Examiner

Jeffrey C. Mullis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2,12,14,24,35 and 36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2,12,14,24,35 and 36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 2, 12, 14, 24, 35 and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by Hedrick et al., Macromolecules 1997,30, 7607-7610.

Hedrick discloses a “cured” composition (last complete paragraph on page 7609) containing a hyperbranched polyether polymer having “reactive groups” (last paragraph of the article prior to “Acknowledgment”) and a “linear double chain ladder polymer” “7” having (reactive) silanol end groups (paragraph bridging the columns on page 7609).

The terminal disclaimer filed on 1-31-2006 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US patent 6,812,298 has been reviewed and is accepted. The terminal disclaimer has been recorded.

The terminal disclaimer filed on 1-31-2006 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US patent 6,646,089 has been reviewed and is accepted. The terminal disclaimer has been recorded.

The terminal disclaimer filed on 1-31-2006 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US patent 6,534,600 has been reviewed and is accepted. The terminal disclaimer has been recorded.

The declaration under 37 CFR 1.132 filed 1-31-06 is insufficient to overcome the rejection of claims 2, 12, 14, 24, 35 and 36 are based upon Hedrick et al. as set forth in the last Office action because: Hedrick specifically disclose that the nanoscopic phase separation

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attained (as opposed to the “gross phase separation” exhibited by benzoyl terminated hyperbranched polymer) was attainable by “employing reactive groups” such as triethoxysilyl (see the last two paragraphs of the article). Such gross phase separation is disclosed to be due to “decreasing the amount of interaction between the organic hyperbranched component and the inorganic silsesquioxane matrix as the chain end is varied from triethoxysilyl to phenolic to benzoyl”. Thus while Hedrick may imply that largely hydrogen bonding exists between the benzoyl terminated hyperbranched polymers, he implies that a covalent interaction results from use of triethoxysilyl end units by use of the word “reactive”. This alone is enough to provide a prima facie case of anticipation of the instant claims. However note further that curing is said to take place above 180 degrees centigrade at the last complete paragraph on page 7609 in order to “prevent large scale phase separation”. However large scale phase separation (such as occurs in the benzoyl and phenolic OH terminated hyperbranched polymer containing compositions but not in the triethoxysilyl terminated ones) does not reasonably appear preventable based on use of hyperbranched polymers solely capable of hydrogen bonding as hydrogen bonding is known to be ineffective at the high temperatures at which the materials are formed as referred to in the last complete paragraph on page 7609 of the article. Note in this re Dubroca (US 4,646,400) at the sentence bridging columns 11 and 12 as well as Chino at paragraph 188.

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Applicant's arguments filed 2-7-06 have been fully considered but they are not persuasive.

Applicants' arguments merely renew those of applicants in applicants' declaration. However, the defects in applicants' declaration are set out above.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication should be directed to Jeffrey C. Mullis at telephone number 571 272 1075.

Jeffrey C. Mullis
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Art Unit 1711

JCM

4-4-06

Jeffrey Mullis, Ph.D.
Primary Examiner
Group 1200 1711

